

Claims as Amended:

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1. A spark plug for an internal combustion engine having a combustion chamber, comprising a middle electrode having an electrode base body (5) with an end face (51) oriented toward the combustion chamber, wherein a precious metal platelet (8) is attached to the end face, wherein an end section (15) of the electrode base body oriented toward the combustion chamber is formed in the shape of a truncated cone in said precious metal platelet (8), wherein the precious metal platelet (8) is formed in the shape of a truncated cone and the diameter of the end face (51) of the electrode base body oriented toward the combustion chamber corresponds to a diameter of a planar end face (84) of the precious metal platelet oriented away from the combustion chamber.

2. The spark plug according to claim 1, wherein the opening angle (21) of the truncated cone-shaped end section of the electrode base body oriented toward the combustion chamber is less than or equal to 180° and/or the opening angle (23) of the truncated cone-shaped precious metal platelet is less than or equal to 90° and the opening angle of each opens in the direction oriented away from the combustion chamber.

3. The spark plug according to claim 1, wherein the end section (15) of the electrode base body oriented toward the combustion chamber has a first truncated cone-shaped region (151) and a second truncated cone-shaped region

(152), wherein a diameter of the end face (156) of the first truncated cone-shaped region oriented away from the combustion chamber corresponds to a diameter of the end face (157) of the second truncated cone-shaped region oriented toward the combustion chamber.

4. The spark plug according to claim 3, wherein an opening angle (27) of the first truncated cone-shaped region and of the precious metal platelet adjoining in the direction of the combustion chamber is less than or equal to 90° and/or an opening angle (25) of the second truncated cone-shaped region is less than 180° and the opening angle of each opens in a direction oriented away from the combustion chamber.

5. The spark plug according to claim 3, wherein the opening angle (28) of the first truncated cone-shaped region and the precious metal platelet adjoining the first truncated cone-shaped region in the direction toward the combustion chamber is less than or equal to 25° and the opening angle opens in the direction oriented toward the combustion chamber.

6. The spark plug according to claim 3, wherein a height of the first truncated cone-shaped region (151), together with the height of the precious metal platelet (8), is less than or equal to 1.5 mm.

7. The spark plug according to claim 3, wherein the diameter of the end face (82) of the precious metal platelet oriented toward the combustion chamber is less than or equal to 1.5 mm.

AD 8. A method for producing middle electrodes for a spark plug of an internal combustion engine having a combustion chamber, in which a precious metal platelet (8) is attached to an electrode base body (5), an end face (51) of the electrode base body oriented toward the combustion chamber being attached to an end face (84) of the precious metal platelet oriented away from the combustion chamber so that a transition region between the precious metal platelet (8) and the electrode base body (5) is produced, wherein the precious metal platelet (8) and a combustion chamber end (15) of the electrode base body are machined in a material-removing manner in such a way that an outer section (11) in the transition region between the precious metal platelet (8) and the electrode base body (5) is removed, wherein said outer section (11) differs in a micro-structure and/or composition from a micro-structure and/or composition of an inner section (12) of the transition region.

9. The method according to claim 8, wherein the precious metal platelet (8) is attached to the electrode base body (5) by means of resistance welding or laser welding.

10. The method according to claim 8, wherein before attachment of the precious metal platelet (8), the end face (51) of the electrode base body oriented toward the combustion chamber is machined in a material-removing manner in such a way that the end face oriented toward the combustion chamber is flat.

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11. The method according to claim 8, wherein the precious metal platelet (8) and the end section (15) of the electrode base body oriented toward the combustion chamber are machined in a material-removing manner in such a way that a first truncated cone-shaped region (151) and a second truncated cone-shaped region (152) are produced, such that the diameter of the end face (156) of the first truncated cone-shaped region oriented away from the combustion chamber corresponds to the diameter of the end face (157) of the second truncated cone-shaped region oriented toward the combustion chamber.

Please add the following new claim:

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12. A spark plug for an internal combustion engine having a combustion chamber, comprising a middle electrode having an electrode base body (5) with an end face (51) oriented toward the combustion chamber, wherein a precious metal platelet (8) is attached to the end face, wherein an end section (15) of the electrode base body oriented toward the combustion chamber is formed in the shape of a truncated cone in said precious metal platelet (8),

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wherein the previous metal platelet (8) is formed in the shape of a truncated cone and the diameter of the end face (51) of the electrode base body oriented toward the combustion chamber corresponds to a diameter of an end face (84) of the precious metal platelet oriented away from the combustion chamber, wherein the end section (15) of the electrode base body oriented toward the combustion chamber has a first truncated cone-shaped region (151) and a second truncated cone-shaped region (152), wherein a diameter of the end face (156) of the first truncated cone-shaped region oriented away from the combustion chamber corresponds to a diameter of the end face (157) of the second truncated cone-shaped region oriented toward the combustion chamber.
